



FEDERAL COMMUNICATIONS COMMISSION

[OMB 3060-0004, FRS 17299]

Information Collection Being Submitted for Review and Approval to Office of Management and Budget

AGENCY: Federal Communications Commission.

ACTION: Notice and request for comments.

SUMMARY: As part of its continuing effort to reduce paperwork burdens, as required by the Paperwork Reduction Act (PRA) of 1995, the Federal Communications Commission (FCC or the Commission) invites the general public and other Federal Agencies to take this opportunity to comment on the following information collection. Pursuant to the Small Business Paperwork Relief Act of 2002, the FCC seeks specific comment on how it might “further reduce the information collection burden for small business concerns with fewer than 25 employees.” The Commission may not conduct or sponsor a collection of information unless it displays a currently valid Office of Management and Budget (OMB) control number. No person shall be subject to any penalty for failing to comply with a collection of information subject to the PRA that does not display a valid OMB control number.

DATES: Written comments and recommendations for the proposed information collection should be submitted on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Comments should be sent to www.reginfo.gov/public/do/PRAMain. Find this particular information collection by selecting "Currently under 30-day Review - Open for Public Comments" or by using the search function. Your comment must be submitted into www.reginfo.gov per the above instructions for it to be considered. In addition to submitting in www.reginfo.gov also send a copy of your comment on the proposed information collection to Nicole Ongele, FCC, via email to PRA@fcc.gov

and to Nicole.Ongele@fcc.gov. Include in the comments the OMB control number as shown in the **SUPPLEMENTARY INFORMATION** below.

FOR FURTHER INFORMATION CONTACT: For additional information or copies of the information collection, contact Nicole Ongele at (202) 418-2991. To view a copy of this information collection request (ICR) submitted to OMB: (1) go to the web page <http://www.reginfo.gov/public/do/PRAMain>, (2) look for the section of the Web page called "Currently Under Review," (3) click on the downward-pointing arrow in the "Select Agency" box below the "Currently Under Review" heading, (4) select "Federal Communications Commission" from the list of agencies presented in the "Select Agency" box, (5) click the "Submit" button to the right of the "Select Agency" box, (6) when the list of FCC ICRs currently under review appears, look for the Title of this ICR and then click on the ICR Reference Number. A copy of the FCC submission to OMB will be displayed.

SUPPLEMENTARY INFORMATION: As part of its continuing effort to reduce paperwork burdens, as required by the Paperwork Reduction Act (PRA) of 1995 (44 U.S.C. 3501-3520), the FCC invited the general public and other Federal Agencies to take this opportunity to comment on the following information collection. Comments are requested concerning: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology. Pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. 3506(c)(4), the FCC seeks specific comment on how it might "further reduce the information collection burden for small business concerns with fewer than 25 employees."

OMB Control Number: 3060-0004.

Title: Sections 1.1307 and 1.1311, Guidelines for Evaluating the Environmental Effects of Radiofrequency Exposure.

Form Number: N/A.

Type of Review: Revision of a currently approved collection.

Respondents: Individuals or households, Business or other for-profit, Not-for-profit institutions, and State, Local or Tribal government.

Number of Respondents and Responses: 335,441 Respondents; 335,441 Responses.

Estimated Time per Response: 0.0833 hours (5 minutes) – 20 hours.

Frequency of Response: On occasion reporting requirement and third-party disclosure requirement.

Obligation to Respond: Required to obtain or retain benefits. Statutory authority for this Information collection is contained in 47 U.S.C. 154(i), 302, 303, 303(r), and 307.

Total Annual Burden: 41,997 hours.

Total Annual Costs: \$2,933,431.

Privacy Act Impact Assessment: No impact(s).

Nature and Extent of Confidentiality: There is a minimal exemption from the Freedom of Information Act (FOIA), [5 U.S.C. 552\(b\)\(4\)](#), and [47 CFR 0.459](#) of the Commission's rules, that is granted for trade secrets and privileged or confidential commercial or financial information, which may be submitted to the Commission as part of the documentation of test results. No other assurances of confidentiality are provided to respondents.

Needs and Uses: The Commission will submit this revised information collection to the Office of Management and Budget (OMB) after this 60-day comment period in order to obtain the full three-year clearance.

This information collection is a result of responsibility placed on the FCC by the National Environmental Policy Act (NEPA) of 1969. NEPA requires that each federal agency evaluate the impact of “major actions significantly affecting the quality of the human environment.” It is the FCC's opinion that this is the most efficient and reasonable method of complying with NEPA with regard to the environmental issue of radiofrequency radiation from FCC-regulated transmitters.

The December 2019 RF Exposure Second Report and Order, ET Docket Nos. 03-137 and 13-184, FCC 19-126, included amendments to rule sections 1.1307, 2.1091 and 2.1093 requiring approval by OMB under the Paperwork Reduction Act. Revision to information collection effected by amendments to rule

section 1.1307 is reported herein. Revision to information collection effected by amendments to rule sections 2.1091 and 2.1093 is reported separately under OMB Information Collection 3060-0057.

In amendments to rule section 1.1307, the Commission revised its implementing rules to reflect modern technology and today's uses. The Commission streamlined the criteria for determining when an applicant or licensee is exempt from our radio frequency (RF) exposure evaluation criteria by replacing service-based exemptions with a formula-based approach. For those applicants and licensees who do not qualify for an exemption, the Commission provided more flexibility to establish compliance with our RF exposure limits. The Commission also specified methods that RF equipment operators can use to mitigate the risk of excess exposure, both to members of the public and trained workers (such as training, supervision, and signage). The amended rules provide more efficient, practical, and consistent RF exposure evaluation procedures and mitigation measures to help ensure compliance with the existing RF exposure limits.

Most of the changes to rule section 1.1307 represent clarification or simplification of existing requirements and are not expected to significantly increase or decrease the estimated burden to respondents or to the Federal government. To address components of the amended requirements that were not included in previous burden estimates, isolated revisions were made to the burden estimates as summarized in the supporting statement of the Information Collection. To update burden estimates based on most recently available data, the Commission also adjusted the total number of respondents/responses, the total annual hourly burden, and the total annual costs from the previous estimates, based on licensing data for calendar year 2019.

The latest RF exposure Second Report and Order, ET Docket Nos. 03-137 and 13-184, FCC 19-126, amended rule section 1.1307 by revising paragraph (b) to read as follows:

§ 1.1307 Actions that may have a significant environmental effect, for which Environmental Assessments (EA) must be prepared.

* * * * *

(b)(1) *Requirements.* (i) With respect to the limits on human exposure to RF provided in Section 1.1310 of this chapter, applicants to the Commission for the grant or modification of construction permits, licenses or

renewals thereof, temporary authorities, equipment authorizations, or any other authorizations for radiofrequency sources must either:

(A) Determine that they qualify for an exemption pursuant to Section 1.1307(b)(3);

(B) Prepare an evaluation of the human exposure to RF radiation pursuant to Section 1.1310 and include in the application a statement confirming compliance with the limits in Section 1.1310; or

(C) Prepare an Environmental Assessment if those RF sources would cause human exposure to levels of RF radiation in excess of the limits in Section 1.1310.

(ii) Compliance with these limits for fixed RF source(s) may be accomplished by use of mitigation actions, as provided in Section 1.1307(b)(4). Upon request by the Commission, the party seeking or holding such authorization must submit technical information showing the basis for such compliance, either by exemption or evaluation. Notwithstanding the preceding requirements, in the event that RF sources cause human exposure to levels of RF radiation in excess of the limits in Section 1.1310 of this chapter, such RF exposure exemptions and evaluations are not deemed sufficient to show that there is no significant effect on the quality of the human environment or that the RF sources are categorically excluded from environmental processing.

(2) *Definitions.* For the purposes of this section, the following definitions shall apply.

Available maximum time-averaged power for an RF source is the maximum available RF power (into a matched load) as averaged over a *time-averaging period*;

Category One is any spatial region that is compliant with the general population exposure limit with *continuous exposure* or *source-based time-averaged exposure*;

Category Two is any spatial region where the general population exposure limit is exceeded but that is compliant with the occupational exposure limit with *continuous exposure*;

Category Three is any spatial region where the occupational exposure limit is exceeded but by no more than ten times the limit;

Category Four is any spatial region where the exposure is more than ten times the occupational exposure limit or where there is a possibility for serious injury on contact.

Continuous exposure refers to the maximum time-averaged exposure at a given location for an *RF source* and assumes that exposure may take place indefinitely. The exposure limits in Section 1.1310 of this chapter are used to establish the spatial regions where mitigation measures are necessary assuming continuous exposure as prescribed in Section 1.1307(b)(4) of this chapter.

Effective Radiated Power (ERP) is the product of the *maximum antenna gain* which is the largest far-field power gain relative to a dipole in any direction for each transverse polarization component, and the *maximum delivered time-averaged power* which is the largest net power delivered or supplied to an antenna as averaged over a *time-averaging period*; *ERP* is summed over two polarizations when present;

Exemption for (an) *RF source(s)* is solely from the obligation to perform a routine environmental evaluation to demonstrate compliance with the RF exposure limits in Section 1.1310 of this chapter; it is not exemption from the equipment authorization procedures described in Part 2 of this chapter, not exemption from general obligations of compliance with the RF exposure limits in Section 1.1310 of this chapter, and not exemption from determination of whether there is no significant effect on the quality of the human environment under Section 1.1306 of this chapter.

Fixed RF source is one that is physically secured at one location, even temporarily, and is not able to be easily moved to another location while radiating;

Mobile device is as defined in Section 2.1091(b) of this chapter;

Plane-wave equivalent power density is the square of the root-mean-square (rms) electric field strength divided by the impedance of free space (377 ohms).

Portable device is as defined in Section 2.1093(b) of this chapter;

Positive access control is mitigation by proactive preclusion of unauthorized access to the region surrounding an RF source where the continuous exposure limit for the general population is exceeded. Examples of such controls include locked doors, ladder cages, or effective fences, as well as enforced prohibition of public access to external surfaces of buildings. However, it does not include natural barriers or other access restrictions that did not require any action on the part of the licensee or property management.

Radiating structure is an unshielded RF current-carrying conductor that generates an RF reactive near electric or magnetic field and/or radiates an RF electromagnetic wave. It is the component of an *RF source* that transmits, generates, or reradiates an RF fields, such as an antenna, aperture, coil, or plate.

RF source is Commission-regulated equipment that transmits or generates RF fields or waves, whether intentionally or unintentionally, via one or more *radiating structure(s)*. Multiple *RF sources* may exist in a single *device*.

Separation distance (variable R in Table 1) is the minimum distance in any direction from any part of a *radiating structure* and any part of the body of a nearby person;

Source-based time averaging is an average of instantaneous exposure over a *time-averaging period* that is based on an inherent property or duty-cycle of a device to ensure compliance with the *continuous exposure* limits;

Time-averaging period is a time period not to exceed 30 minutes for fixed RF sources or a time period inherent from device transmission characteristics not to exceed 30 minutes for mobile and portable RF sources;

Transient individual is an untrained person in a location where occupational/controlled limits apply, and he or she must be made aware of the potential for exposure and be supervised by trained personnel pursuant to Section 1.1307(b)(4) of this chapter where use of time averaging is required to ensure compliance with the general population exposure limits in Section 1.1310 of this chapter.

(3) Determination of exemption.

(i) For single RF sources (*i.e.*, any single fixed RF source, mobile device, or portable device, as defined in paragraph (b)(2) of this section): A single RF source is exempt if:

(A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of this section. Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);

(B) The available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the separation distance (cm);

(C) Or using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least $\lambda/2\pi$, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

Table 1— TO §1.1307(b)(3)(i)(C)—Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
0.3 – 1.34	1,920 R ²
1.34 – 30	3,450 R ² /f ²
30 – 300	3.83 R ²
300 – 1,500	0.0128 R ² f
1,500 – 100,000	19.2R ²

(ii) For multiple RF sources. Multiple RF sources are exempt if:

(A) The available maximum time-averaged power of each source is no more than 1 mW and there is a separation distance of two centimeters between any portion of a radiating structure operating and the nearest portion of any other radiating structure in the same device, except if the sum of multiple sources is less than 1 mW during the time-averaging period, in which case they may be treated as a single source

(separation is not required). This exemption may not be used in conjunction with other exemption criteria other than those in paragraph 1.1307(b)(3)(i)(A) of this section. Medical implant devices may only use this exemption and that in paragraph 1.1307(b)(3)(i)(A).

(B) in the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

Where

a = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(B) of this section for P_{th} , including existing exempt transmitters and those being added.

b = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(C) of this section for Threshold ERP, including existing exempt transmitters and those being added.

c = number of existing fixed, mobile, or portable RF sources with known evaluation for the specified minimum distance including existing evaluated transmitters.

P_i = the available maximum time-averaged power or the ERP, whichever is greater, for fixed, mobile, or portable RF source i at a distance between 0.5 cm and 40 cm (inclusive).

$P_{th,i}$ = the exemption threshold power (P_{th}) according to paragraph (b)(3)(i)(B) of this section for fixed, mobile, or portable RF source i .

ERP_j = the ERP of fixed, mobile, or portable RF source j .

$ERP_{th,j}$ = exemption threshold ERP for fixed, mobile, or portable RF source j , at a distance of at least $\lambda/2\pi$ according to the applicable formula of paragraph (b)(3)(i)(C) of this section.

$Evaluated_k$ = the maximum reported SAR or MPE of fixed, mobile, or portable RF source k either in the device or at the transmitter site from an existing evaluation at the location of exposure.

Exposure Limit_k = either the general population/uncontrolled maximum permissible exposure (MPE) or specific absorption rate (SAR) limit for each fixed, mobile, or portable RF source *k*, as applicable from Section 1.1310 of this chapter.

(4) Mitigation. (i) As provided in paragraphs (b)(4)(ii) through (vi) of this section, specific mitigation actions are required for fixed RF sources to the extent necessary to ensure compliance with our exposure limits, including the implementation of an RF safety plan, restriction of access to those RF sources, and disclosure of spatial regions where exposure limits are exceeded.

(ii) Category One – INFORMATION: No mitigation actions are required when the RF source does not cause continuous or source-based time-averaged exposure in excess of the general population limit in Section 1.1310 of this part. Optionally a green “INFORMATION” sign may offer information to those persons who might be approaching RF sources. This optional sign, when used, must include at least the following information: Appropriate signal word “INFORMATION” and associated color (green), an explanation of the safety precautions to be observed when closer to the antenna than the information sign, a reminder to obey all postings and boundaries (if higher categories are nearby), up-to-date licensee (or operator) contact information (if higher categories are nearby), and a place to get additional information (such as a website, if no higher categories are nearby).

(iii) Category Two – NOTICE: Mitigation actions are required in the form of signs and positive access control surrounding the boundary where the continuous exposure limit is exceeded for the general population, with the appropriate signal word “NOTICE” and associated color (blue) on the signs. Signs must contain the components discussed in paragraph (b)(4)(vi) of this section. Under certain controlled conditions, such as on a rooftop with limited access, a sign attached directly to the surface of an antenna will be considered sufficient if the sign specifies a minimum approach distance and is readable at this separation distance and at locations required for compliance with the general population exposure limit in Section 1.1310 of this part. Appropriate training is required for any occupational personnel with access to controlled areas within restrictive barriers where the general population exposure limit is exceeded, and

transient individuals must be supervised by trained occupational personnel upon entering any of these areas. Use of time averaging is required for transient individuals to ensure compliance with the general population exposure limit.

(iv) Category Three – CAUTION: Signs (with the appropriate signal word “CAUTION” and associated color (yellow) on the signs), controls, or indicators (*e.g.*, chains, railings, contrasting paint, diagrams) are required (in addition to the positive access control established for Category Two) surrounding the area in which the exposure limit for occupational personnel in a controlled environment is exceeded by no more than a factor of ten. Signs must contain the components discussed in paragraph (b)(4)(vi) of this section. If the boundaries between Category Two and Three are such that placement of both Category Two and Three signs would be in the same location, then the Category Two sign is optional. Under certain controlled conditions, such as on a rooftop with limited access, a sign may be attached directly to the surface of an antenna within a controlled environment if it specifies the minimum approach distance and is readable at this distance and at locations required for compliance with the occupational exposure limit in Section 1.1310 of this part. If signs are not used at the occupational exposure limit boundary, controls or indicators (*e.g.*, chains, railings, contrasting paint, diagrams, *etc.*) must designate the boundary where the occupational exposure limit is exceeded. Additionally, appropriate training is required for any occupational personnel with access to the controlled area where the general population exposure limit is exceeded, and transient individuals must be supervised by trained personnel upon entering any of these areas. Use of time averaging is required for transient individuals to ensure compliance with the general population exposure limit. Further mitigation by reducing exposure time in accord with six-minute time averaging is required for occupational personnel in the area in which the occupational exposure limit is exceeded. However, proper use of RF personal protective equipment may be considered sufficient in lieu of time averaging for occupational personnel in the areas in which the occupational exposure limit is exceeded. If such procedures or power reduction, and therefore Category reduction, are not feasible, then lockout/tagout procedures in 29 CFR Section 1910.147 must be followed.

(v) Category Four – WARNING/DANGER: Where the occupational limit could be exceeded by a factor of more than ten, “WARNING” signs with the associated color (orange), controls, or indicators (e.g., chains, railings, contrasting paint, diagrams) are required (in addition to the positive access control established for Category Two) surrounding the area in which the occupational exposure limit in a controlled environment is exceeded by more than a factor of ten. Signs must contain the components discussed in paragraph (b)(4)(vi) of this section. “DANGER” signs with the associated color (red) are required where immediate and serious injury will occur on contact, in addition to positive access control, regardless of mitigation actions taken in Categories Two or Three. If the boundaries between Category Three and Four are such that placement of both Category Three and Four signs would be in the same location, then the Category Three sign is optional. No access is permitted without Category reduction. If power reduction, and therefore Category reduction, is not feasible, then lockout/tagout procedures in 29 CFR Section 1910.147 must be followed.

(vi) RF exposure advisory signs must be viewable and readable from the boundary where the applicable exposure limits are exceeded, pursuant to 29 CFR Section 1910.145, and include at least the following five components:

- (A) Appropriate signal word, associated color {i.e., {“DANGER” (red), “WARNING” (orange), “CAUTION,” (yellow) “NOTICE” (blue)}};
- (B) RF energy advisory symbol;
- (C) An explanation of the RF source;
- (D) Behavior necessary to comply with the exposure limits; and
- (E) Up-to-date contact information.

(5) *Responsibility for compliance.* (i) In general, when the exposure limits specified in Section 1.1310 of this part are exceeded in an accessible area due to the emissions from multiple fixed RF sources, actions necessary to bring the area into compliance or preparation of an Environmental Assessment (EA) as specified in Section 1.1311 of this part are the shared responsibility of all licensees whose RF sources produce, at the area in question, levels that exceed 5% of the applicable exposure limit proportional to

power. However, a licensee demonstrating that its facility was not the most recently modified or newly-constructed facility at the site establishes a rebuttable presumption that such licensee should not be liable in an enforcement proceeding relating to the period of non-compliance. Field strengths must be squared to be proportional to SAR or power density. Specifically, these compliance requirements apply if the square of the electric or magnetic field strength exposure level applicable to a particular RF source exceeds 5% of the square of the electric or magnetic field strength limit at the area in question where the levels due to multiple fixed RF sources exceed the exposure limit. Site owners and managers are expected to allow applicants and licensees to take reasonable steps to comply with the requirements contained in paragraph 1.1307(b)(1) of this section and, where feasible, should encourage co-location of RF sources and common solutions for controlling access to areas where the RF exposure limits contained in Section 1.1310 of this part might be exceeded. Applicants and licensees are required to share technical information necessary to ensure joint compliance with the exposure limits, including informing other licensees at a site in question of evaluations indicating possible non-compliance with the exposure limits.

(ii) Applicants for proposed RF sources that would cause non-compliance with the limits specified in Section 1.1310 at an accessible area previously in compliance must submit an EA if emissions from the applicant's RF source would produce, at the area in question, levels that exceed 5% of the applicable exposure limit. Field strengths must be squared if necessary to be proportional to SAR or power density.

(iii) Renewal applicants whose RF sources would cause non-compliance with the limits specified in Section 1.1310 at an accessible area previously in compliance must submit an EA if emissions from the applicant's RF source would produce, at the area in question, levels that exceed 5% of the applicable exposure limit. Field strengths must be squared if necessary to be proportional to SAR or power density.

Federal Communications Commission.

Marlene Dortch,

Secretary,

Office of the Secretary.